

REMARKS

Claims 1 - 97 were previously pending in the application. Claims 2 - 3, 5, 14 - 24, 26 - 29, 38 - 48, 51 - 52, 54, 63 - 73, 75 - 76, 78 and 87 - 97 have been previously withdrawn in light of unelected species and are herein cancelled without prejudice or disclaimer. Previously examined claims 1, 4, 6 - 13, 25, 30 - 37, 49 - 50, 53, 55 - 62, 74, 77 and 79 - 86, in addition to new claims 98 - 122 (herein added) are currently presented for the Examiner's review.

I. Claim Rejections - 35 U.S.C. § 112, First Paragraph

Claims 1, 4, 6 - 13, 25, 30 - 37, 49, 50, 53, 55 - 62, 74, 77 and 79 - 86 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement.¹ For the following reasons, this rejection is respectfully traversed.

The analysis for whether there is support in the specification for what is recited in the claims is not one of *ipsissima verba* or *in haec verba* (verbatim recitation) (see M.P.E.P. § 2163.02, second-to-last paragraph). The test is whether the subject matter was included in the application's disclosure as originally filed. In the instant case, more-than-ample support exists in the disclosure as originally filed for the recitation of the "ink consumption amount controlling means for controlling the ink consumption amount of said recording head based on the ink reservation amount as a function of the temperature change per unit of time[,]" as explained below.

¹ Based on Applicant's reading of the rationale underlying the rejection, the Examiner seems to reject the claims under the written description requirement and not the enablement requirement.

In the application's specification (as filed), ample support exists for the above-noted recitation. Clearly table 1 on page 28 of the specification (and accompanying text) supports this feature, as does the related formula on page 28, $T = T_t + k \Delta T$ (wherein T = the ink temperature, T_t = the detected head temperature, k is an adjustment coefficient, and ΔT is a temperature change amount).

"Function" is typically defined as "[a] variable so related to another that for each value assumed by one there is a value determined for the other" (American Heritage Dictionary (4th Ed. 2003)). Accordingly, the ink reservation amount acts as a "function" as stated by the adjustment coefficient, k , to the temperature change amount, ΔT , in further relation to the detected head temperature, T_t and ink temperature T .

In light of the previous and in relation to the rejection under 35 U.S.C. § 112, first paragraph, table 1 and the formula $T = T_t + k \Delta T$ on page 28 of the specification (as originally filed) provide ample support for the above-noted features. Accordingly, this rejection is appropriately traversed and the Examiner is therefore respectfully requested to reconsider and withdraw this rejection.

II. Claim Rejections - 35 U.S.C. § 112, Second Paragraph

Claims 1, 4, 6 - 13, 25, 30 - 37, 49, 50, 53, 55 - 62, 74, 77 and 79 - 86 also stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For the following reasons, this rejection is respectfully traversed.

Under § 112, second paragraph, the standard is not one of whether the recited claims have support in the specification. Instead, the standard is one of whether "one of ordinary skill

in the art could . . . interpret the metes and bounds of the claim so as to avoid infringement” (see M.P.E.P. § 2173 generally and § 2173.02 in particular).

Surely one of ordinary skill in the art (even one of little skill in the art) recognizes that the above-noted claims provide precise metes and bounds as to the subject matter claimed. Clearly, the claims recite features that are particularly defined and distinctly stated. Accordingly, this rejection is appropriately traversed and the Examiner is therefore respectfully requested to reconsider and withdraw this rejection.

III. Claim Rejections - 35 U.S.C. § 103

A. Claims 1, 4, 6, 12, 13, 25, 30, 35 - 37, 49, 50, 53, 55, 60 - 62, 74, 77, 79 and 84 - 86

Claims 1, 4, 6, 12, 13, 25, 30, 35 - 37, 49, 50, 53, 55, 60 - 62, 74, 77, 79 and 84 - 86 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S.P. No. 5,900,888 (“Kurosawa”) in view of U.S.P. No. 6,145,949 (“Takahashi”). For the following reasons, this rejection is respectfully traversed.

Independent claim 1 recites the ink consumption amount controlling means controlling the ink consumption amount of the recording head, wherein the ink consumption amount controlling means is based on: (i) the temperature change amount per unit of time of the recording head (which is acquired by temperature change amount obtaining means), and (ii) the ink reservation amount in the ink reservoir (which is acquired by ink reservation amount obtaining means). Independent claims 25, 49, 50 and 74 recite similar features.

Succinctly, neither the Takahashi nor the Kurosawa reference teaches or suggests the above-noted features. That is, while Takahashi may disclose reading a temperature for formulation of a driving waveform (see Figs. 4 - 6; and Col. 6, lines 10 - 30), the reference is

entirely silent on the ink consumption amount being based on a temperature change amount *per unit of time*. Notably, the Kurosawa reference perpetuates this deficiency. Accordingly, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Additionally, a non-limiting embodiment of the present invention takes into account that the temperature change rate (i.e., temperature change amount per unit of time) of the ink attributed to the change in temperature of the recording head differs depending upon the amount of ink remaining in the ink reservoir. Notably, both Takahashi and Kurosawa are absolutely silent on this feature.

Furthermore, claims 25, 49, 50 and 74 recite features similar to, and are therefore averred to be patentable for reasons similar to, independent claim 1. Additionally, dependent claims 4, 6 - 13, 30 - 37, 53, 55 - 62, 77 and 79 - 86, in addition to new claims 98 - 122, are further averred to be patentable at least for reasons similar to those reasons finding claim 1 patentable and/or by virtue of their respective dependencies.

B. Claims 7 - 11, 31 - 34, 56 - 59 and 80 - 83

Claims 7 - 11, 31 - 34, 56 - 59 and 80 - 83 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kurosawa in view of Takahashi and in further view of JP 05-050590 ("Takayanagi") and U.S.P. No. 6,290,321 ("Murray"). For the following reasons, this rejection is respectfully traversed.

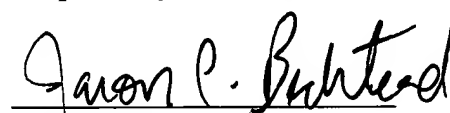
As noted above, Kurosawa and Takahashi are deficient. Takayanagi and Murray fail to cure these deficiencies. Accordingly, it is respectfully asserted that claims 7 - 11, 31 - 34, 56 - 59 and 80 - 83 are patentable, and the Examiner is respectfully requested to reconsider and withdraw this rejection.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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